
Second meeting of the WHO guideline development group –Anaemia: Use and interpretation of haemoglobin concentrations for assessing anaemia status in individuals and populations

Virtual meeting (13:00 to 16:00 CET each day)

01-03 June 2022

15-17 June 2022

SCOPE AND PURPOSE

The World Health Organization (WHO) is committed to driving public health impact in every country ensuring healthy lives and promoting well-being for all at all ages. Through its unique normative function in health, WHO aims to provide global, evidence-informed recommendations on the use of haemoglobin concentrations to assess and manage anaemia in individuals and populations. WHO's normative, data, and research and innovation activities drive the creation of global public goods. This work has been included as one of the WHO Global Public Health Goods for country impact and aims to support regional and country offices work and to help WHO Member States and their partners to make evidence-informed decisions on the appropriate actions in their efforts to improve access to quality essential health services, support countries to be prepared for health emergencies, and address the determinants of health. It will also help in increasing capacity in the countries to respond to their needs on assessing anaemia prevalence and control, and to prioritize essential actions in national health policies, strategies and plans.

Accurate characterisation of anaemia is critical to understand the burden and epidemiology of this problem, for planning public health interventions, and for clinical care of people across the life course. WHO started this project for updating haemoglobin cutoffs to define anaemia in individuals and populations by convening a prioritization exercise via a two-stage international consultation. Six subtopics were established, including physiology of anaemia, haemoglobin thresholds for different population groups, definition of anaemia across clinical and environmental contexts, approach to development of anaemia thresholds, laboratory, equipment, regulatory and diagnostic considerations, and implementation of WHO's haemoglobin threshold guidelines.

Based on the identified subtopics and the normative needs identified at various technical meetings organized by WHO¹, the available evidence was presented to the WHO guideline development group-

¹ <https://nyaspubs.onlinelibrary.wiley.com/toc/17496632/2019/1450/1>.

Anaemia² after input from the steering committee, to advise and support this normative work. The GDG meeting in 2019 developed and prioritised PICO (Population, Intervention, Comparator and Outcomes) questions and identified topics for further discussions, technical meetings or research.

The key questions identified by the GDG related to the review of evidence on the need for adjustments in haemoglobin concentrations to account for differences in settings and populations. The variations in haemoglobin concentrations during the lifecycle particularly during pregnancy, as well as the need for adjustments by elevation above sea level of the place of residence/work, smoking, genetic background, infection/inflammation with special emphasis in malaria endemicity, as well as considerations on samples/methods for haemoglobin determinations, were identified as the main points to address before setting the reviewed cut off points. Three technical meetings have been convened since the first GDG meeting in 2019.

- In October 2020, a technical meeting on considerations for adjustments of haemoglobin concentrations to define anaemia by elevation above sea level and smoking was held virtually to address the need and magnitude of adjustments required to account for elevation above sea level and smoking in the cut-off points of haemoglobin concentrations to define anaemia in different settings and populations.
- Another technical meeting was held on April 2021 on considerations to determine haemoglobin concentrations to define anaemia in the lifecycle, particularly during pregnancy, to discuss the basis for the revision of the cutoffs to define anaemia focusing on a statistical approach and/or a functional/clinical outcomes approach.
- On December 2021 WHO convened a third technical meeting to define the role of infection, inflammation and genetic ancestry as potential determinants for adjustments of haemoglobin concentrations to define anaemia, especially at population level. This meeting also addressed considerations about blood sampling and analytical methods used for haemoglobin determinations.

WHO is convening the second meeting of the WHO guideline development group – anaemia on 01-03 June 2022 and 15-17 June 2022 (13:00 to 16:00 CET each day). The objectives of this meeting are to:

1. Discuss the results and conclusions from the three technical meetings convened by recommendation of the GDG and the results presented by the Secretariat in the evidence to decision framework to revise the cut offs on the use and interpretation of haemoglobin concentrations to be used to define anaemia in individuals and populations;

² [WHO guideline development group meeting - Use and interpretation of haemoglobin concentrations for assessing anaemia status in individuals and populations](#)

2. Formulating recommendations on the use and interpretation of haemoglobin concentrations for assessing anaemia status in individuals and populations and determining their strength taking into account benefits, harms, values and preferences, feasibility, equity, ethics, acceptability, resource requirements and other factors, as appropriate;
3. Defining implications for further research and gaps;
4. Discussing implementation and evaluation considerations of the guideline.